



IFW\$

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO. 027053-0107

Applicant: Angela BELCHER et al.

Title: PEPTIDE MEDIATED SYNTHESIS OF METALLIC AND
MAGNETIC MATERIALS

Appl. No.: 10/665,721

Filing Date: 09/22/2003

Examiner: Teresa D. Wessendorf

Art Unit: 1639

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.56

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each non-U.S. patent document and each non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

03/14/2006 HALLI11 00000113 10665721
01 FC:1806 180.00 OP

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(c), before the mailing date of either a final action under 37 CFR §1.113, a notice of allowance under 37 CFR §1.311, or an action that otherwise closes prosecution in the application.

RELEVANCE OF EACH DOCUMENT

All of the documents are in English.

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

FEE

A credit card payment form in the amount of \$180.00 is enclosed in accordance with 37 CFR §1.17(p) to cover the fee associated with an information disclosure statement under 37 CFR §1.97(d) in the amount of \$180.00.


Although Applicants believe that no fee is required for this Request, the Commissioner is hereby authorized to charge any additional fees which may be required for this Request to Deposit Account No. 19-0741.

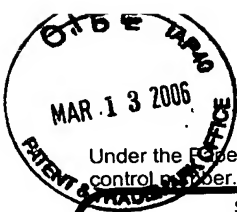
Respectfully submitted,

3/1/06

Date

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5569
Facsimile: (202) 672-5399


for Stephen B. Maebius
Attorney for Applicant
Registration No. 35,264
Ky # 43,445



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Complete if Known

Application Number	10/665,721
Filing Date	09/22/2003
First Named Inventor	Angela M. BELCHER et al.
Group Art Unit	1639
Examiner Name	Teresa D. Wessendorf
Attorney Docket Number	027053-0107

Sheet 1 of 8

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	C1	4,593,002		DULBECCO	06-1986	
	C2	5,223,409		LADNER et al.	06-1993	
	C3	5,264,563		HUSE	11-1993	
	C4	5,270,170		SCHATZ et al.	12-1993	
	C5	5,316,922		BROWN et al.	05-1994	
	C6	5,403,484		LADNER et al.	04-1995	
	C7	5,510,240		LAM et al.	04-1996	
	C8	5,571,698		LADNER et al.	11-1996	
	C9	5,585,646		KOSSOVSKY et al.	12-1996	
	C10	5,683,867		BIESECKER et al.	11-1997	
	C11	5,714,330		BRENNER et al.	02-1998	
	C12	5,723,323		KAUFFMAN et al.	03-1998	
	C13	5,739,305		CUBICCIOTTI	04-1998	
	C14	5,750,373		GARRARD et al.	05-1998	
	C15	5,751,018		ALIVISATOS et al.	05-1998	
	C16	5,763,192		KAUFFMAN et al.	06-1998	
	C17	5,814,476		KAUFFMAN et al.	09-1998	
	C18	5,817,483		KAUFFMAN et al.	10-1998	
	C19	5,821,047		GARRARD et al.	10-1998	
	C20	5,824,514		KAUFFMAN et al.	10-1998	
	C21	5,837,500		LADNER et al.	11-1998	
	C22	5,859,210		STOWOLITZ et al.	01-1999	
	C23	5,866,363		PIECZENIK	02-1999	
	C24	5,985,353		LAWTON et al.	11-1999	
	C25	5,990,479		WEISS et al.	11-1999	
	C26	6,040,136		GARRARD et al.	03-2000	
	C27	6,100,035		KAUFFMAN et al.	08-2000	
	C28	6,207,392		WEISS et al.	03-2001	
	C29	6,235,540		SIIMAN et al.	05-2001	
	C30	2001/0008759		MARKS et al.	07-2001	
	C31	6,329,209		WAGNER et al.	12-2001	
	C32	6,413,723		KAUFFMAN et al.	07-2002	
	C33	6,417,340		MIRKIN et al.	07-2002	
	C34	6,423,538		WITTRUP et al.	07-2002	
	C35	2002/0107179		POTTS et al.	08-2002	
	C36	6,472,147		JANDA et al.	10-2002	
	C37	6,492,107		KAUFFMAN et al.	12-2002	
	C38	6,569,641		KAUFFMAN et al.	05-2003	

Examiner
Signature

Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/665,721
				Filing Date	09/22/2003
				First Named Inventor	Angela M. BELCHER et al.
				Group Art Unit	1639
				Examiner Name	Teresa D. Wessendorf
Sheet	2	of	8	Attorney Docket Number	027053-0107

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Offic e ³	Number ⁴	Kind Code ⁵ (if known)				
	C39	EP	0 552 267		PEPTIDE THERAPEUTICS LIMITED	07/28/1993		
	C40		02/48701		LIEBER	06/20/2002		
	C41		91/14696		Gilead Sciences, Inc.	10/03/1991		
	C42		99/13313		HUDSON	03/18/1999		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	C43	ALIVISATOS, A. P. et al., Organization of 'nanocrystal molecules' using DNA, Nature, 1996, 382: pp. 609-611.	
	C44	BALL, P., It all falls into place, Nature, 2001, 413: pp. 667-668.	
	C45	BERGSHOEFF, M. M. et al., Transparent nanocomposites with ultrathin, electrospun nylon-4,6 fiber reinforcement, Advanced Materials, 1999, 11: pp. 1362-1365.	
	C46	BOOY, F. P. et al., Cryo-electron microscopy reveals macromolecular organization within biological liquid crystals seen in the polarizing microscope, Int. J. Biol. Macromol, 1985, 7: pp.327-335.	
	C47	BRAUN, P. V. et al., Nanostructure templating in inorganic solids with organic lyotropic liquid crystals, J. Am. Chem. Soc., 1999, 121: pp. 7302-7309.	
	C48	BROWN, S., Engineered Iron Oxide-Adhesion Mutants of the <i>Escherichia coli</i> Phase λ Receptor, 1992, 89: pp. 8651-8655.	
	C49	BROWN, S., Metal-recognition by repeating polypeptides, Nature Biotechnology, Nature Biotechnology, 1997, 15: pp. 269-272.	
	C50	CHEN, J. T. et al., Self-assembled smectic phases in rod-coil block copolymers, Science, 1996, 273: pp. 343-346.	
	C51	CHEUNG, C. L. et al., Growth and fabrication with single-walled carbon nanotube probe microscopy tips, Appl. Phys. Lett., 2000, 76: pp. 3136-3138.	
	C52	CLARK, N. A., Smectic-C "chevron," a planar liquid-crystal defect: Implications for the surface-stabilized ferroelectric liquid-crystal geometry, Phys. Rev. A, 1988, 37: pp. 1053-1056.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.

WASH_1557074.1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known	
		Application Number	10/665,721
		Filing Date	09/22/2003
		First Named Inventor	Angela M. BELCHER et al.
		Group Art Unit	1639
		Examiner Name	Teresa D. Wessendorf
		Attorney Docket Number	027053-0107
Sheet	3	of	8

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	C53	COSTERTON, J. W. et al., Bacterial Biofilms: A common cause of persistent infections, Science, 1999, 284: pp. 1318-1322.	
	C54	DAS, P. et al., Liquid crystal polymorphism in F-actin: Optical microscopic and rotatory dispersion studies, J. Chem. Phys., 1999, 111: pp. 8240-8250.	
	C55	DESCHENES, L. et al., Single-molecule studies of heterogeneous dynamics in polymer melts near the glass transition, Science, 2001, 292: pp. 255-258.	
	C56	DEVLIN, J. J. et al., Random peptide libraries: A source of specific protein binding molecules, Science, 1990, 249: pp. 404-406.	
	C57	DEVORET, M. H. et al., Amplifying quantum signals with the single-electron transistor, Nature, 2000, 406: pp. 1039-1046.	
	C58	DOGIC, Z. et al., Cholesteric phase in virus suspensions, Langmuir, 2000, 16: pp. 7820-7824.	
	C59	DOGIC, Z. et al., Smectic phase in a colloidal suspension of semiflexible virus particles, Phys. Rev. Lett., 1997, 78: pp. 2417-2420.	
	C60	DOSHI, J. et al., Electrospinning process and applications of electrospun fibers, J. of Electrostatics, 1995, 35: pp. 151-160.	
	C61	DOUGLAS, T. et al., Protein engineering of a viral cage for constrained nanomaterials synthesis, Adv. Mater., 2002, 14: pp. 415-418.	
	C62	DOUGLAS, T. et al., Virus particles as templates for materials synthesis, Adv. Mater., 1999, 11: pp. 679-681.	
	C63	DUAN, et al., "Synthesis and optical properties of gallium arsenide nanowires," Applied Physics Letters, Volume 76(9):1116-1118 (2000).	
	C64	FIELD, M. et al., Ordering nanometer-scale magnets using bacterial thread templates, Appl. Phys. Lett. 1998, 73: pp. 1739-1741.	
	C65	FRADEN, "Phase Transitions in Colloidal Suspensions of Virus Particles"; Baus, M. et al. (ed.), Observation, prediction and simulation of phase transitions in complex fluids, Kluwer Academic Pub., Boston: 1995, pp.113-164.	
	C66	FULTON, T. A. et al., Observation of single-electron charging effects in small tunnel junctions, Phys. Rev. Lett., 1987, 59: pp. 109-112.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.

WASH_1557074.1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known		
			Application Number	10/665,721	
			Filing Date	09/22/2003	
			First Named Inventor	Angela M. BELCHER et al.	
			Group Art Unit	1639	
			Examiner Name	Teresa D. Wessendorf	
			Attorney Docket Number	027053-0107	
Sheet	4	of	8		

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ⁶
	C67	GLOGAROVA, M., The influence of an external electric field on the structure of chiral sm C* liquid crystal, Mol. Cryst. Liq. Cryst, 1983, 91: pp. 309-325.		
	C68	GOODBY, J. W. et al., A new molecular ordering in helical liquid crystals, J. Am. Chem. Soc., 1989, 111: pp. 8119-8125.		
	C69	GRAY, G.W., et al., "The smectic B phase," Smectic Liquid Crystals – Textures and Structures, pgs. 23-44 (Leonard Hill, London, UK 1984).		
	C70	HARTGERINK et al., Peptide-Amphiphile Nanofibers: A Versatile Scaffold for the Preparation of Self-Assembling Materials, PNAS, 2002, 99: pp. 5133-5138.		
	C71	HAYASHI, C. et al., Molecular Architecture and Evolution of a Modular Spider Silk Protein Gene, Science, 2000, 287: pp. 1477-1479.		
	C72	HE, S.-J. et al., A twist grain boundary-like twisted smectic phase in monodisperse poly(γ -benzyl α ,L-glutamate) produced by recombinant DNA techniques, Macromolecules, 1998, 31: pp. 9387-9389.		
	C73	HOHMAN, M. M. et al., Electrospinning and electrically forced jets. I. Stability theory, Physics of Fluids, 2001, 13: pp. 2201-2220.		
	C74	HONG, S. et al., A Nanoplotter with both parallel and serial writing capabilities, Science, 2000, 288: pp. 1808-1811.		
	C75	HONG, S. et al., Multiple ink nanolithography: Toward a multiple-pen nano-plotter, Science, 1999, 286: pp. 523-525.		
	C76	HUANG, L. et al., Generation of synthetic elastin-mimetic small diameter fibers and fiber networks, Macromolecules, 2000, 33: pp. 2989-2997.		
	C77	ISSAENKO, S.A. et al., Quantum theory of chiral interactions in cholesteric liquid crystals, Phys. Rev. E, 1999, 60: pp. 578-597.		
	C78	ITO, T. et al., Pushing the limits of lithography, Nature, 2000, 406: pp. 1027-1031.		
	C79	JACKMAN, R., Three-dimensional metallic microstructures fabricated by soft lithography and microelectrodeposition, Langmuir, 1999, 15: pp. 826-836.		
	C80	JIN, H.-J., Electrospinning <i>Bombyx mori</i> silk with poly(ethylene oxide), Biomacromolecules, 2002, 3: pp. 1233-1239.		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>			Complete if Known		
			Application Number	10/665,721	
			Filing Date	09/22/2003	
			First Named Inventor	Angela M. BELCHER et al.	
			Group Art Unit	1639	
			Examiner Name	Teresa D. Wessendorf	
Sheet	5	of	8	Attorney Docket Number	027053-0107

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ⁶
	C81	KINGON, A. I. et al., Alternative dielectrics to silicon dioxide for memory and logic devices, Nature, 2000, 406: pp. 1032-1038.		
	C82	LABRENZ, M. et al, Formation of sphalerite (ZnS) deposits in natural biofilms of sulfate-reducing bacteria, Science, 2000, 290: pp. 1744-1747.		
	C83	LAPOINTE, J. et al., Filamentous bacterial viruses VIII. liquid crystals of fd., Mol. Crys. and Liq. Cryst., 1973, 19: pp. 269-278.		
	C84	LEE, S.-W. et al., Virus-based alignment of inorganic, organic, and biological nanosized materials, Adv. Mat., 2003, 15: pp. 689-692.		
	C85	LEE, S.-W. et al., Chiral smectic C structures of virus-based films, Langmuir, 2003, 19: pp. 1592-1598.		
	C86	LENG Y. et al., Dynamic simulations of adhesion and friction in chemical force microscopy, J. Am. Chem. Soc., 2002, 124: pp. 11764-11770.		
	C87	LI, D. et al., Electrospinning of polymeric and ceramic nanofibers as uniaxially aligned arrays, Nano Letters, 2003, 3: pp. 1167-1171.		
	C88	LI, D. et al., Fabrication of titania nanofibers by electrospinning, Nano Letters, 2003, 3: pp. 555-560.		
	C89	LI, L.-S, et al., Semiconductor nanorod liquid crystals and their assembly on a substrate, Advanced Materials, 2003, 15: pp. 408-411.		
	C90	LI, L.-S., et al., Semiconductor nanorod liquid crystals, Nano Letters, 2002, 2: pp. 557-560.		
	C91	MAEDA, H., Atomic Force Microscopy Studies for Investigating the Smectic Structures of Colloidal Crystals of β -FeOOH, Langmuir, 1996, 12: pp. 1446-1452.		
	C92	MAEDA, Y. et al., Schiller layers in β -ferric oxyhydroxide sol as an order-disorder phase separation system, Colloids and Surfaces, 1983, 6: pp. 1-16.		
	C93	MANN, S. et al., Crystalization at inorganic-organic interfaces: biominerals and biomimetic synthesis, Science, 1993, 261: pp. 1286-1292.		
	C94	MANN, S. et al., Biologically programmed nanoparticle assembly, Adv. Mater., 2000, 12: pp. 147-150.		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.

WASH_1557074.1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known		
			Application Number	10/665,721	
			Filing Date	09/22/2003	
			First Named Inventor	Angela M. BELCHER et al.	
			Group Art Unit	1639	
			Examiner Name	Teresa D. Wessendorf	
Sheet	6	of	8	Attorney Docket Number	027053-0107

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ⁶
	C95	MATHIAS, J. P., Self-assembly through hydrogen-bonding: peripheral crowding – a new strategy for the preparation of stable supramolecular aggregates based on parallel, connected CA ₃ -M ₃ rosettes, J. Am. Chem. Soc., 1994, 116: pp. 4326-4340.		
	C96	MATTHEWS, J. A. et al., Electrospinning of collagen nanofibers, Biomacromolecules 2002, 3: pp. 232-238.		
	C97	MATTOUSSI et al., Self-Assembly of CdSe-ZnS Quantum Dot Bioconjugates Using an Engineered Recombinant Protein, J. Am. Chem. Soc., 2000, 122: pp. 12142-12150.		
	C98	MEGELSKI, S. et al., Micro- and nanostructured surface morphology on electrospun polymer fibers, Macromolecules, 2002, 35: pp. 8456-8466.		
	C99	MEIRAV, U. et al., Single-electron charging and periodic conductance resonances in GaAs nanostructures, Phys. Rev. Lett., 1990, 65: pp. 771-774.		
	C100	MELOSH, N. A. et al., Ultrahigh-density nanowire lattices and circuits, Science, 2003, 300: pp. 112-115.		
	C101	MIRKIN C. A. et al., A DNA-based method for rationally assembling nanoparticles into macroscopic materials, Nature, 1996, 382: pp. 607-609.		
	C102	MUTHUKUMAR, M. et al., Competing interactions and levels of ordering in self-organizing polymeric materials, Science, 1997, 277: pp. 1225-1232.		
	C103	NIIKURA, K., "Ordering of Inorganic Nanocrystals Using Viruses Kagaku to Kogyo (Tokyo, Japan) vol., 55, no. 2, p. 1363 (2002).		
	C104	NORRIS, D. J. et al., Size dependence of exciton fine structure in CdSe quantum dots, Phys. Rev. B, 1996, 53: pp. 16347-16354.		
	C105	NYGAARD, S. et al., Surface-specific zeolite-binding proteins, Adv. Mat., 2002, 14: pp. 1853-1856.		
	C106	ONSAGER, L., The effects of shape on the interaction of colloidal particles, Annals N.Y. Acad. Sci., 1949, 51: p. 627-659.		
	C107	PATRICK D. L. et al., Atomistic molecular dynamics simulations of chemical force microscopy, J. Am. Chem. Soc., 2003, 125: pp. 6762-6773.		
	C108	PATRICK, D. L. et al., Nanometer-scale aspects of molecular ordering in nanocrystalline domains at a solid interface: The role of liquid crystal-surface interactions studied by STM and molecule corrals, J. of Phys. Chem. B., 1999, 103: pp. 8328-8336.		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.

WASH_1557074.1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	10/665,721
		Filing Date	09/22/2003
		First Named Inventor	Angela M. BELCHER et al.
		Group Art Unit	1639
		Examiner Name	Teresa D. Wessendorf
(use as many sheets as necessary)		Attorney Docket Number	027053-0107
Sheet	7	of	8

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	C109	PEERCY, P. S., The drive to miniaturization, Nature, 2000, 406: pp. 1023-1026.	
	C110	PERCEC, V. et al., Self-organization of supramolecular helical dendrimers into complex electronic materials, Nature, 2002, 419, pp. 384-387, 862.	
	C111	QIN, D. et al., Fabrication of ordered two-dimensional arrays of micro- and nanoparticles using patterned self-assembled monolayers as templates, Adv. Mater., 1999, 11: pp. 1433-1437.	
	C112	REYNOLDS, T. et al., Bakers' yeast, a model for fungal biofilm formation, Science, 2001, 291: pp. 878-881.	
	C113	ROTH, T. A. et al., A minimized M13 coat protein defines the requirements for assembly into the bacteriophage particle, J. Mol. Biol., 2002, 322: pp. 357-367.	
	C114	RUECKES, T. et al., Carbon nanotube-based nonvolatile random access memory for molecular computing, Science, 2000, 289: pp. 94-97.	
	C115	SCHOELKOPF, R. J. et al., The radio-frequency single-electron transistor (RF-SET): A fast and ultrasensitive electrometer, Science, 1998, 280: pp. 1238-1242.	
	C116	SEEMAN, N. C., DNA in a material world, Nature, 2003, 421: pp. 427-431.	
	C117	SEEMAN, N. C. et al., Emulating biology: Building nanostructures from the bottom up, Proc. Natl. Acad. Sci., 2002, 99: pp. 6451-6455.	
	C118	SHENTON, W. et al., Synthesis of cadmium sulphide superlattices using self-assembled bacterial S-layers, Nature, 1997, 389: pp. 585-587.	
	C119	SONIN, A.A., Freely Suspended Liquid Crystalline Films, (John Wiley & Sons, Ltd, New York, 1998), pp. 25-43.	
	C120	TAYLOR, G., Electrically driven jets, Proc. Roy. Soc. Lond. A., 1969, 313: pp. 453-475.	
	C121	TSORTOS, A. et al., The dual role of fibrinogen as inhibitor and nucleator of calcium phosphate phases: The importance of structure, J. of Colloid and Interface Science, 1996, 177: pp. 257-262.	
	C122	VALLUZZI, R. et al., Silk: molecular organization and control of assembly, Phil. Trans. R. Soc. Lond. B., 2002, 357: pp. 165-167.	

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.

WASH_1557074.1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/665,721
				Filing Date	09/22/2003
				First Named Inventor	Angela M. BELCHER et al.
				Group Art Unit	1639
				Examiner Name	Teresa D. Wessendorf
				Attorney Docket Number	027053-0107
Sheet	8	of	8		

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶	
	C123	VOLLRATH, F. et al., Liquid crystalline spinning of spider silk, Nature, 2001, 410: pp. 541-548.		
	C124	WHALEY, S. R., "Borrowing Ideas from Nature: Peptide specific to gallium arsenide", Materials Research Soc. Symposium Proceedings, Vol. 599, pp. 189-199 (2000).		
	C125	WALBA, D. M. et al., Detecting molecular chirality by scanning tunneling microscopy, Acc. Chem. Res., 1996, 29: pp. 591-597.		
	C126	WANG, X. et al., Electrospun nanofibrous membranes for highly sensitive optical sensors, Nano Letters, 2002, 2: pp. 1273-1275.		
	C127	WEBER, P. C. et al., Structural origins of high-affinity biotin binding to streptavidin, Science, 1989, 243: pp. 85-88.		
	C128	WELSH, L. C. et al., Evidence for tilted smectic liquid crystalline packing of fd <i>Inovirus</i> from x-ray fiber diffraction, Macromolecules, 1996, 29: pp. 7075-7083.		
	C129	WHITCHURCH, C. B. et al., Extracellular DNA required for bacterial biofilm formation, Science, 2002, 295: p. 1487.		
	C130	WNEK, G. E. et al., Electrospinning of nanofiber fibrinogen structures, Nano Letters, 2003, 3: pp. 213-216.		
	C131	YAO, Z. et al., Carbon nanotube intramolecular junctions, Nature, 1999, 402: pp. 273-276.		
	C132	YU, S. M. et al., Smectic ordering in solutions and films of a rod-like polymer owing to monodispersity of chain length, Nature, 1997, 389: pp. 167-170.		
	C133	ZHENG, W. Y. et al., Mesogen orientation within smectic C* side chain liquid crystalline diblock copolymers, Macromolecules, 1998, 31: pp. 2686-2689.		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.